

ENDOCRINOLOGY

Hormone Rescues Hopeless Victims of Addison's Disease

Ninety Patients Saved From Death by Substance Thought To Have Effect Similar to That of Insulin on Diabetes

DR. LEONARD G. ROWNTREE has reported before a staff meeting of the Mayo Clinic at Rochester, Minn., his experience in the treatment of Addison's disease with a substance which Drs. W. W. Swingle and J. J. Pfiffner, of Princeton University, have isolated from the suprarenal gland. The substance is not yet on the market. It is being produced in small quantities, in a scientific way, by Drs. Swingle and Pfiffner and Drs. Rowntree and C. H. Greene are investigating its value in treatment.

Years will elapse before its final value will be known, but its immediate effects in the crises of Addison's disease have been dramatic.

To get the significance of this work, a little of the background is necessary. In 1849, Thomas Addison, an English physician, pointed out the relation between disease of the suprarenal glands and a group of symptoms that marked a comparatively rare condition. This condition came to be known as Addison's disease.

The organs which are attacked, the suprarenal glands, are glands of internal secretion; that is, they have no duct leading from them, but give their products directly to the blood stream. They lie above the kidneys, are roughly triangular in shape, and are small but very important. From them comes the well known substance adrenalin and other substances.

Many Have Tried

It is one of these other substances, a material which is essential to life and which is missing in Addison's disease, that a number of scientists have been trying to isolate, and which, apparently, Drs. Swingle and Pfiffner have obtained. Without this substance not a great deal of progress has been made in the treatment of Addison's disease since the days of Addison.

The present period of progress began in March of this year. At that time Drs. Swingle and Pfiffner in a note in

Science offered experimental evidence that they had isolated the long sought "cortical hormone" of the suprarenal gland. They followed this up by further evidence.

Shortly thereafter, Dr. Rowntree was called to see a patient who was in a state of collapse from Addison's disease, the condition which physicians speak of as a crisis of the disease. Hitherto, treatment of patients in this condition has been practically hopeless. A telegram sent to Dr. Swingle brought a supply of the hormone by air mail.

One of the characteristics of the disease is vomiting that cannot be stopped. The patient just referred to could not retain food. Within two days after the hormone had been given, however, he asked for wieners and sauerkraut but accepted a double order of beefsteak instead. Three days after the last dose of the hormone had been given to this patient he said that he felt in a perfect state of health.

Another patient, who was tired, exhausted, and whose condition was getting worse was given the hormone. By the fifth day she was able to run along the corridor of the hospital without difficulty. The effect has been similar to those just related in three other cases, five in all.

These results are startlingly good. Dr. Rowntree, whose experience with Addison's disease includes some ninety patients, a large number for this rare disease, has not seen their equal. Yet, the question remains how to evaluate the treatment.

On the basis of what has been accomplished, Drs. Swingle, Pfiffner, Rowntree and Greene make no claim that the cure of Addison's disease has been found. Neither would any other scientist. Insulin is not a cure for diabetes, but it is a substitute for a missing necessary substance, and, after nearly ten years, it seems that it will maintain life and a state as effective as health.

Whether or not the suprarenal cortical hormone will prove as efficient as insulin is as yet unknown. In many



Dr. W. W. SWINGLE

Who with Dr. J. J. Pfiffner, both of Princeton University, isolated what is thought to be the long sought "cortical hormone" of the suprarenal gland, and which has been successful in combating Addison's disease.

cases of Addison's disease the underlying condition which causes destruction of the suprarenal glands is tuberculosis. There is no reason to believe that the cortical hormone will cure tuberculosis. It is not even known yet whether, if the tuberculosis is checked, the hormone will prolong life year after year, as it is becoming evident that insulin seems able to do in diabetes.

It apparently is established, however, that the cortical hormone has saved life in the crises of Addison's disease. In the words of Dr. Rowntree, before the Post Graduate Medical Assembly, at its recent meeting:

"The effects in the crises of Addison's disease are as striking, and I believe as sure, as the effects of insulin in the coma of diabetes. Time only will reveal to what extent the cortical hormone could constitute a cure."

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METEOROLOGY—SEISMOLOGY

Storm May Have Caused Earth to Quiver

SEVERE earth vibrations, known to scientists as "microseisms," which occurred for several days beginning Sunday, Dec. 14, seem to be associated with the area of low atmospheric pressure that was travelling up the Atlantic coast at the time. Rev. F. W. Sohon, S. J., in charge of the Georgetown University Seismograph Station in Washington, said that the vibrations were very marked, and would have prevented a satisfactory record of a real earthquake